

AN ANALYTICAL APPROACH TOWARDS FACTORS CONTRIBUTING CONSUMER PURCHASE IN TERMS OF GROCERY RETAILING IN INDIAN METRO CITIES

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ABSTRACT

Since the emergence of organized retail format, the pattern of retail consumption has changed its nature. But number of research in this area depict that the grocery retail market is still predominantly captured by local kirana stores or mom n pop stores. Present research aims to find out the most important factors contributing to consumer purchase in terms of grocery items and establish a framework to facilitate policy intervention. In this regard, a descriptive study has been conducted with the help of personal interview and close ended questionnaire (for the customers) on the basis of 18 purchase behaviour parameters; with the help of Factor Analysis through SPSS and Bayesian Probabilistic Network through Hugin Lite software, primary data is processed, analysed and concluded upon

KEYWORDS: *Analysed, Consumer Purchase, Grocery & Retail*

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INTRODUCTION

According to Kotak Institutional Equities (KIE, 2015), Indian Grocery accounts for half of the Indian total retail consumption. Though both the form of organized grocery retail- brick and mortar as well as online grocers are leaving no stone unturned to capture the market, there is still a dominance of the local kirana stores or mom n pop stores in terms of grocery purchase. Not only in rural areas, in urban as well as in metro cities, people are still prone to purchase their monthly grocery items from their local kirana stores. What could be the reason behind it? With pleasant and attractive atmospherics, wide ranges of brand varieties and customer support system, why are not they being able to catch consumers' mind? Why can't such modern format outrage the traditional format of grocery retailing? To find answer of all such questions present study has been conducted to identify the major factors behind the consumer preferences in terms of grocery purchase and to develop a framework to help in strategic decision making of the organised retail format to reengineering the whole process, if necessary. In this regard the both the male and female grocery consumers of age group more than 25 from Indian metro cities are taken into consideration.

LITERATURE REVIEW

Consumer's preference is generally perceived of as an individual's attitude towards a set of objects, which has an significant impact on consumer decision-making process (Lichtenstein & Slovic, 2006). Alternatively, it can also be conceived as evaluative judgment in terms of liking or disliking a particular product (Scherer, 2005).

Customer preference refers to how customers select goods and services in relation to factors like taste, preference and individual choices. Factors such as the consumer's income and price of the goods do not influence the customer's preferred products or services. Mishra (2007) highlighted the importance of benchmarking. Retail firms are concentrated on the maximum utilization with respect to consumers' need and preference. Seiders and Tigert (2000) compared the shoppers of super center as well as traditional stores in his study. In format choice Supercenter shoppers identified low prices and range of product assortment as the key factors whereas location and product quality was the two main factors for traditional supermarket shoppers. Herrmann and Heitmann (2006) investigated that a huge variety of assortments may dominant a purchasing decision. The consumer's preferences process depends on level of participation in the purchase decision and their need for cognition, as well as the capacity of their memory (Alba et al, 1992). Sanjeev Verma (2007) illustrated consumer preferences for retail store selection in Mumbai. The study was undertaken to comprehend the factors influencing consumer preferences for retail store selection and framing marketing strategies to meet the desire of consumers. This study inspects the association between consumer preferences and the importance of some significant store attributes.

METHODOLOGY

A descriptive study has been conducted with the help of personal interview and close ended questionnaire (for the customers) on the basis of 18 purchase behaviour parameters. For this study data has been collected from the customers shopping to and from Kolkata, Delhi, Mumbai, Chennai and Bangalore airport.

This research paper is descriptive in nature and is based on primary data collected from Indian metro cities. A questionnaire is framed accordingly and 314 consumers are questioned individually during their visit to kirana stores at Kolkata during past 3 months with the help of Factor Analysis through SPSS and Bayesian Probabilistic Network through Hugin Lite software, primary data is processed, analysed and concluded upon.

DATA ANALYSIS

Reliability Statistics

Cronbach's Alpha	N of items
.891	18

Firstly reliability analysis has been performed on the data set. Here the value of Cronbach's Alpha 0.891 is acceptable as it confirms that there is internal consistency of the set of items of a given scale.

FACTOR ANALYSIS

Here, Bartlett's test of sphericity is significant, as p value is .000 which is less than .05. Thus from the perspective of Bartlett's test, factor analysis is feasible. As Bartlett's test is significant, a more discriminating index of factor analyzability is the KMO. High values (between 0.5 and 1.0) indicate factor analysis is appropriate. Values below 0.5 imply that factor analysis may not be appropriate. For this data set, it is .857 (very close to 1.0), which is very large, so the KMO also supports factor analysis.

FACTOR IDENTIFICATION

Determination Based on Eigen values

In this approach, only those factors with eigenvalues greater than 1 are considered. Other factors are not included

in this model.

Here, from the SCREE PLOT and the table TOTAL VARIANCE EXPLAINED, 3 factors are identified whose eigenvalues are more than 1.

Determination Based on Percentage of Variance

The number of factors extracted can also be determined in a way so that the cumulative percentage of variance extracted by the factors reaches a satisfactory level.

Here according to the analysis, the cumulative percentage of variance extracted by the 3 factors is 75.12 % (from the table TOTAL VARIANCE EXPLAINED), which is quite satisfactory.

FACTOR INTERPRETATION

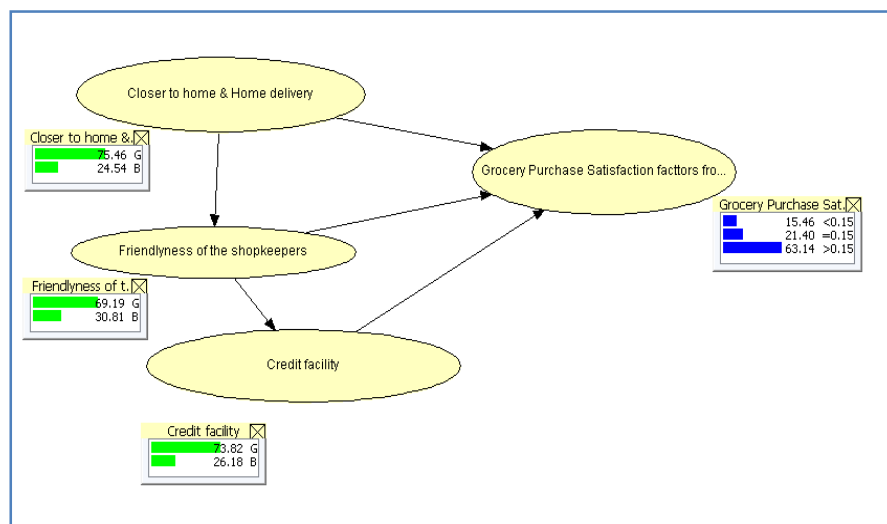
Factor interpretation is facilitated by identifying the variables that have large loading on the same factor. That factor can be interpreted in terms of variables that load high on it.

In the ROTATED COMPONENT MATRIX,

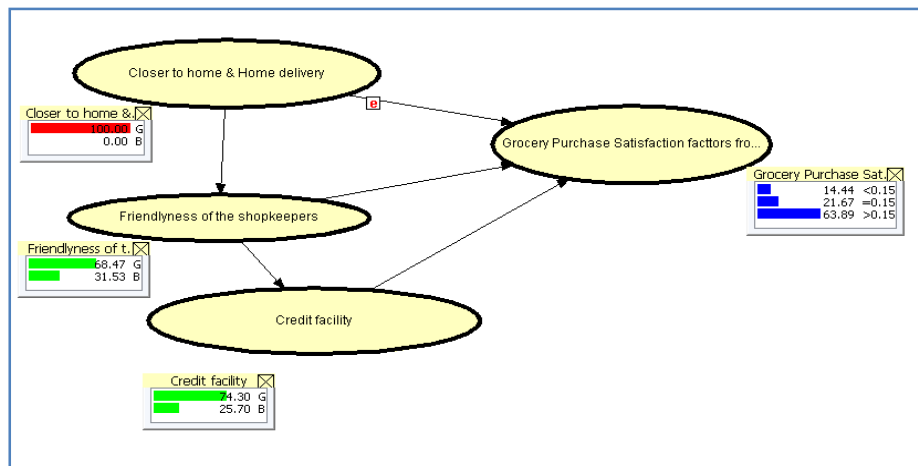
- Component 1 has high coefficients .814 and .756 for variables Closer to Home and Home Delivery
- Component 2 has high coefficient .718 for variable Friendliness of the Shopkeepers
- Component 3 has high coefficients .673 for variables Credit Facilities

As Component 1 is treated as principal component, so, in this case, Closer to Home and Home Delivery should be the most important factor followed by the Friendliness of the Shopkeepers and Credit Facilities according to the consumers.

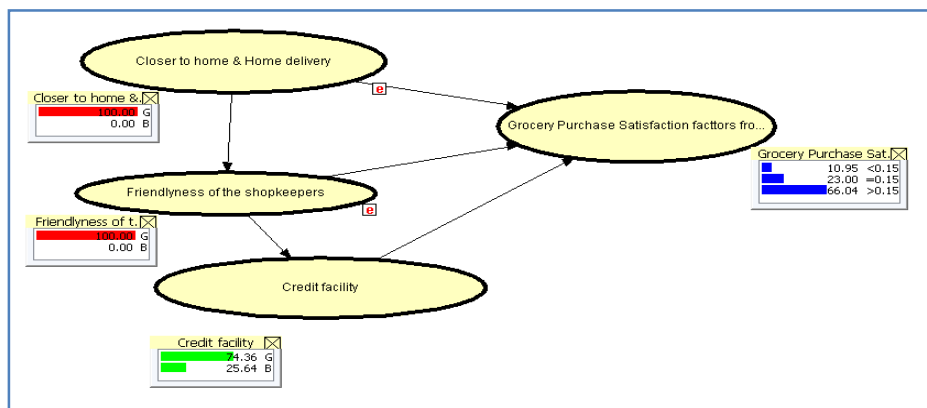
BAYSIAN NETWORK: HUGIN LITE OUTPUT



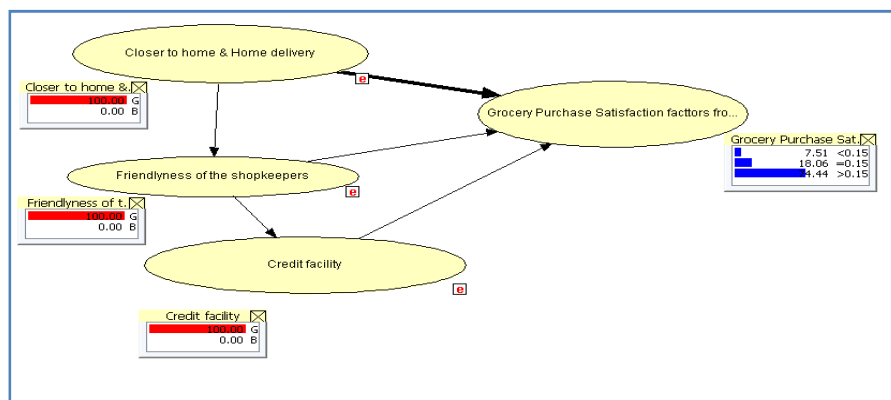
SCENARIO ANALYSIS 1



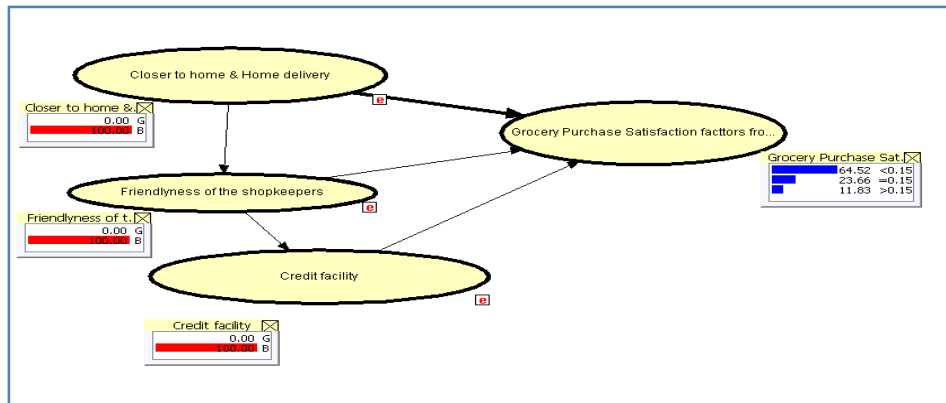
SCENARIO ANALYSIS 2



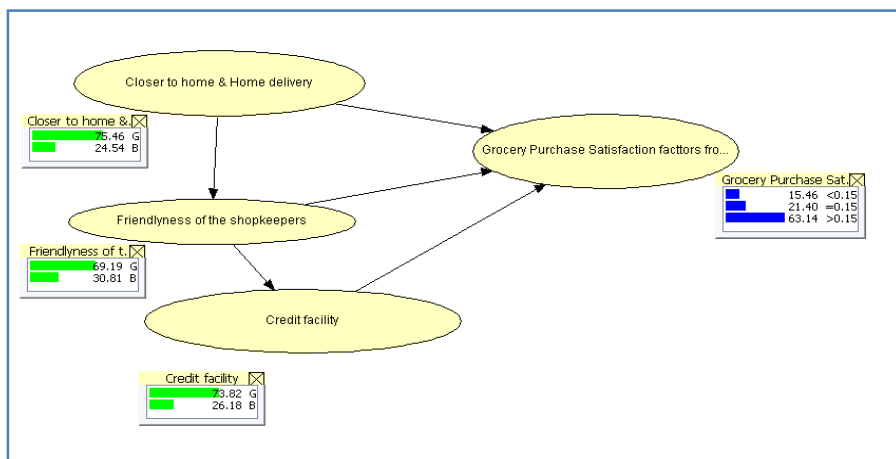
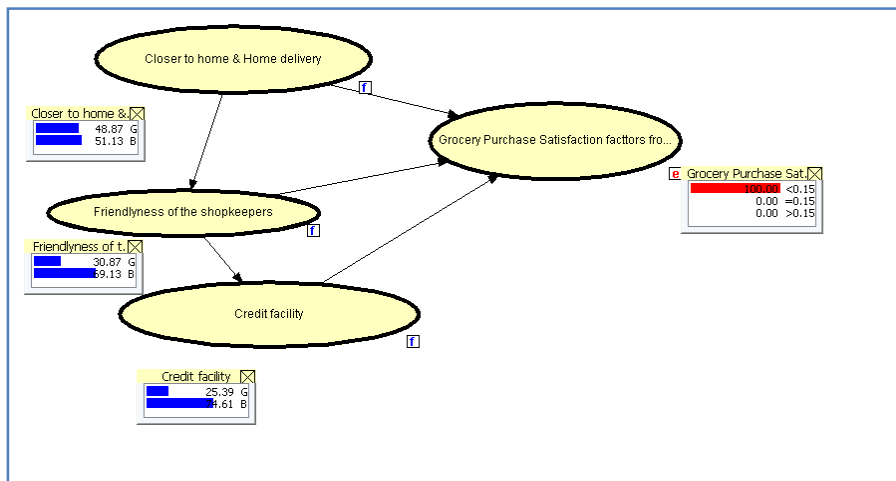
SCENARIO ANALYSIS 3



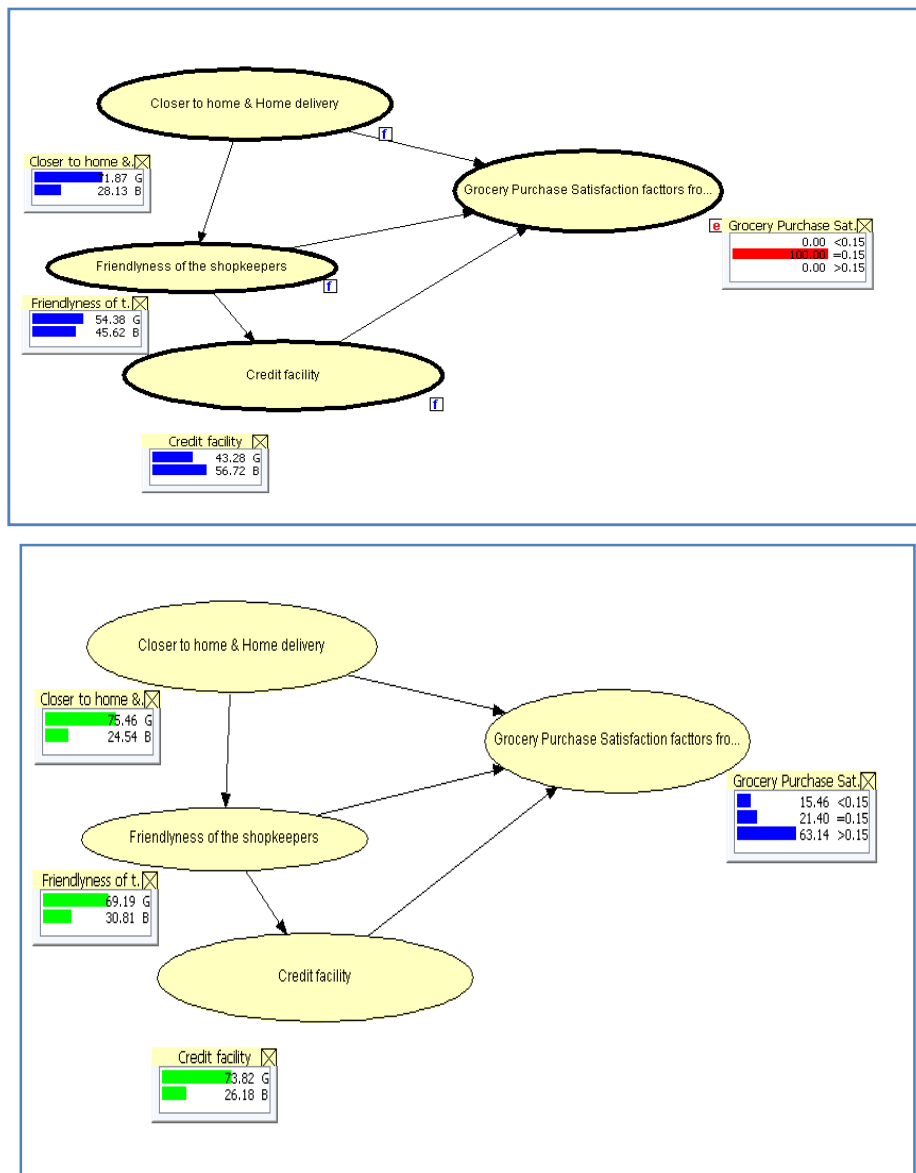
SCENARIO ANALYSIS 4



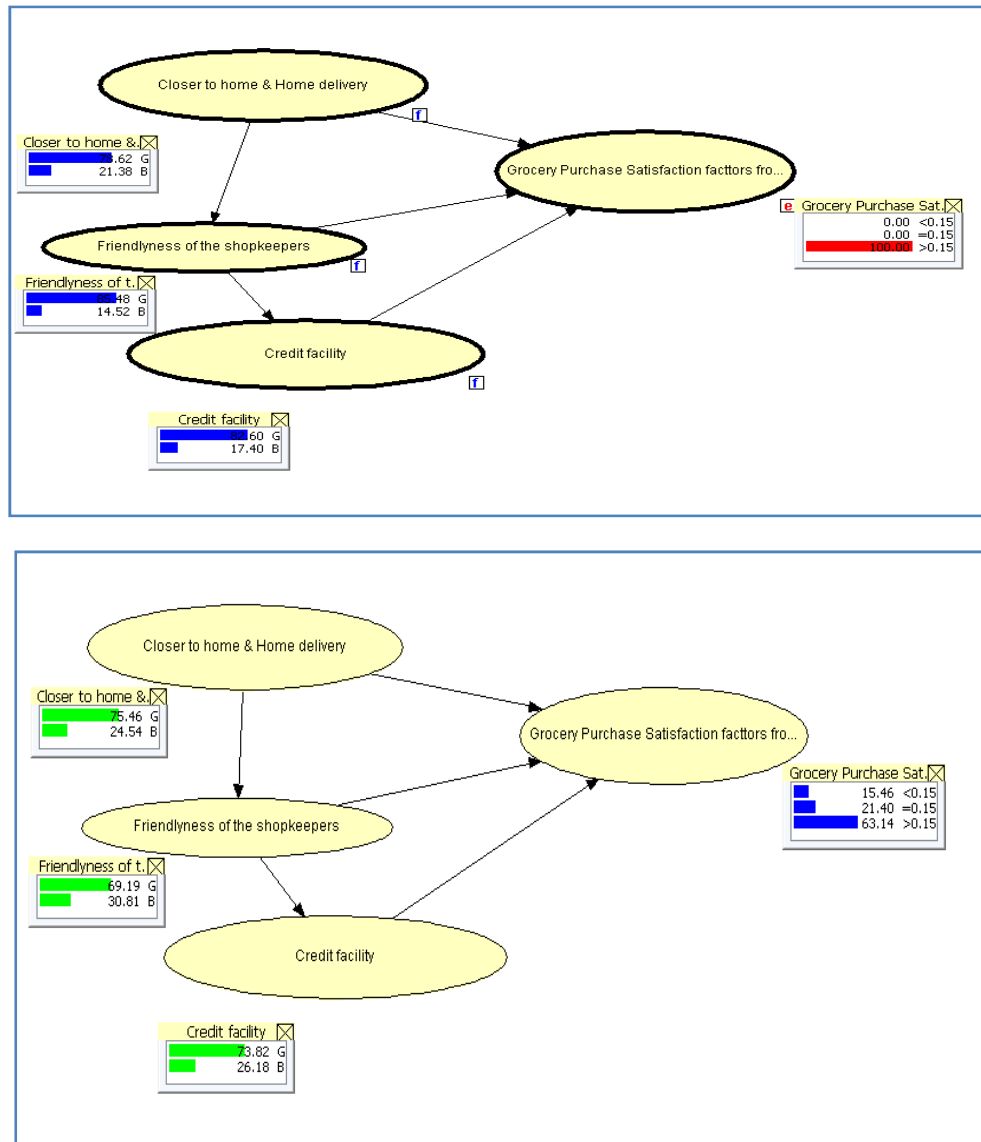
CAUSAL ANALYSIS 1



CAUSAL ANALYSIS 2



CAUSAL ANALYSIS 3



SCENARIO AND CAUSAL ANALYSIS

Scenario Analysis and Causal Analysis will help analyse and make policy intervention.

Scenario Analysis: If, for example, 100 percent Good *credit facility*, is there, it shows changes in other variable which capture the simultaneity. This is just a framework of *satisfaction level of grocery purchase*.

Causal Analysis: Causal analysis is evidence based. It reverses the whole thing. actual values or evidence of information regarding *consumer purchase in terms of grocery items* data is propagated to all the nodes in the network i.e. used to calculate updated probabilities of all the causal factors and as such gives us information on likely values of these causal opinion/perception variables that may generate desired *consumer purchase in terms of grocery items*.. This helps in strategic management of *consumer purchase in terms of grocery items* and similar variables of interest.

CONCLUSIONS AND DISCUSSIONS

Factor Analysis demonstrates *Closer to Home and Home Delivery* and *Price aspect of green cotton, Friendliness of the Shopkeepers and Credit Facilities* are the most significant factor influencing *consumer purchase in terms of grocery items* in Indian metro cities.

Scenario Analysis develops a Bayesian Probability Network to model on the causal variables extracted from the first phase whereas Causal Analysis calculates updated probabilities of all the causal factors and as such gives us information on likely values of these causal opinion/perception variables that may generate desired *consumer purchase in terms of grocery items*. The causal variable has, definitely, taken on the value which has resulted in low scores in *Closer to Home and Home Delivery, Friendliness of the Shopkeepers and Credit Facilities*,

The model combines independent or causal variables, leading to this outcome. It can also be utilised to construct some kind of policy intervention or conjecture. This means if the marketer wants medium *consumer purchase in terms of grocery items* then it must be ensured that the causal variables take on appropriate values or if marketer wants high *consumer purchase in terms of grocery items* then it must be ensured that the causal variables similarly take on appropriate values.

Thus this research lays the foundation for future investigation in a very promising but highly complex world grocery market and to look into the shortcomings of organized retailers. Box Jenkins method may be applied to Postulate a General Class of Models for forecasting the trend of consumer preference in organised as well as traditional grocery retailers to formulate a strategy for the same.

One probable step may be to enhance the scope of research by expanding the target area through including international grocery market to evaluate and benchmark their *consumer purchase in terms of grocery items* with that of our country with the help of other multivariate analysis (i.e. cluster and discriminant analysis), efficiency- productivity study.

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